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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,781	11/30/2001	Sadayoshi Kajino	111251	4584

25944 7590 02/10/2003

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EXAMINER

VAN PELT, BRADLEY J

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 02/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,781

Applicant(s)

KAJINO ET AL.

Examiner

Bradley J Van Pelt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said center housing" in line 15. There is insufficient antecedent basis for this limitation in the claim.

The term "maximum" in claim 2 is a relative term, which renders the claim indefinite. The term "maximum" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 5 recites the limitations "The starter further comprising," "said front housing," and "said center housing." There is insufficient antecedent basis for the limitations in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagashima et al. (USPN 5,167,162).

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Nagashima et al. disclose a starter (1) for an internal combustion engine including a planetary gear speed reduction mechanism (9), a pinion (12) to be engaged with a ring gear of said engine and a pinion drive shaft (16) connected to said speed reduction mechanism comprising: a motor (2) having a motor housing (2b) with a first outside diameter and a motor shaft (2a); a front housing (13) having a flange (33) for supporting said pinion drive shaft, said flange having a bearing (14) for supporting said pinion drive shaft at an end of said shaft and a plurality of fastening holes (see fig. 2, ends of 33) disposed at a circumference having second diameter through which a plurality of fastening bolts (34) is fixed to a portion (32) of said internal combustion engine; and a center casing (11) having approximately the same outside diameter as said motor housing and a bearing (15) for supporting said pinion drive shaft at the other end, said center housing (11) being disposed between said motor housing and said front housing for aligning said motor shaft, said planetary gear speed reduction mechanism and said pinion drive shaft; wherein a difference between said first diameter and said second diameter is larger than a maximum outside diameter of said fastening bolt so that said fastening bolt can be inserted into said fastening hole along outer peripheries of said motor housing (see Fig. 1).

Nagashima et al. disclose said difference is larger than a maximum outside diameter of a socket wrench.

Nagashima et al. disclose an end frame (right end portion Fig. 2) having a plurality of radially projecting fixing portions (bolts mounted in right end portion Fig. 2) disposed away from said fastening holes so as to obstruct said socket wrench.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagashima et al. (USPN 5,167,162).

Nagashima et al. disclose the claimed invention except said outside first diameter of said motor housing is between 100mm and 118mm, and said planetary gear speed reduction mechanism has a speed reduction ratio between 3.8 and 4.4.

It would have been obvious an obvious matter to modify the outside first diameter of the motor housing between 100mm and 118mm, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the planetary gear speed reduction mechanism with a speed reduction ratio between 3.8 and 4.4, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagashima et al. (USPN 5,167,162) in view of Wakatsuki et al. (USPN 4,325,265).

Nagashima et al. disclose all of the instantly claimed invention except a dust seal disposed between said front housing and said center housing.

Wakatsuki et al. disclose a dust seal (24) disposed between a front housing and a center housing.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the starter apparatus of Nagashima et al. with a dust seal for the purpose of preventing unwanted particles interfering with the functionality of the starter, sequentially reducing maintenance costs.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mazzorana (USPN 4,184,378), Kajino et al. (USPN 5,821,662), Ohya et al. (USPN 5,844,336), and Morishita (USPN 5,847,471)


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J Van Pelt whose telephone number is (703)305-8176. The examiner can normally be reached on M-Th 7:00-4:30, 2nd F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703)308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-9391 for regular communications and (703)305-3597 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-2168.

BJVP
February 5, 2003


DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600